

REMARKS

Reconsideration and withdrawal of the rejection and the allowance of all claims now pending in the above-identified patent application (*i.e.*, Claims 29-48) are respectfully requested in view of the foregoing amendments and the following remarks.

At the outset, it should be recognized that the present invention provides hygienic protection for endoscopes, so that such instruments, which have become highly valuable medical diagnostic and procedure tools, can be readily re-used on a patient following recent use on a prior patient. Endoscopes, lacking proper protection against contamination, must generally be dismantled after each use and thoroughly cleaned, which is both time-consuming and quite expensive.

The present invention, as now claimed, provides hygienic protection for an endoscope, which includes a cover, which is closed at its distal end and which is transparent for optical information, at least on the front side thereof, with the cover able to be rolled thereon in a direction of the axis of the endoscope. One or more working channels for the endoscope extend in a parallel position in relation to the endoscope and terminate in an open manner on the distal end of the cover – the working channel being connected only to the distal end of the cover. The working channels are positioned between the outside of the endoscope and the inner side of the cover. Finally, there are one or more vacuum channels, having one or more openings, which terminate at the inside of the cover on the side facing away from the patient, which are in addition to the working channels.

More particularly, the vacuum channels terminate in an open manner within the envelope of the endoscope protection and can have additional side openings. These side openings advantageously terminate at the inside of the cover on the side of the cover facing away from the patient. When a vacuum is applied to this channel, the air located between the cover and endoscope shaft is sucked out with the consequence being that the cover is drawn firmly onto the endoscope. The vacuum is maintained during the examination. This, a fixed connection between the cover and endoscope, is produced advantageously and rapidly after the endoscope has been introduced into the cover, which is dimensioned somewhat larger in the interior diameter, preferably in the proximal part.

During application of the hygiene protection, one hand of the medical practitioner fixes the freely movable working channels and vacuum channels on the endoscope shaft, while the practitioner's other hand rolls on the cover above the channels. The combination of a protective cover with its own working channels extends outside of the endoscope with the protective cover and the working channels being connected to one another in the distal region of the cover in an airtight and germ-free manner. For attachment of the protection cover in accordance with the presently-claimed invention, the distal end of the cover is pushed onto the endoscope, so that the front face, which is transmissible for optical information, is correctly positioned, *i.e.*, positioned parallel to the distal end of the endoscope. The optical contact between the endoscope and the transparent front face of the cover is preferably produced by means of a fluid, such as microscope immersion oil, which ideally has the same refractive index as the lens of the endoscope.

As will be explained in greater detail hereinafter, nowhere in the prior art is such a novel and hygienically effective protection apparatus and related method for an endoscope, in which the openings of the vacuum channels terminate at the inside of the cover of the endoscope protection at a side of the cover facing away from the patient, either disclosed or suggested.

By the present amendments, Applicant has amended independent Claims 29, 47 and 48 to now recite that the one or more vacuum channels have at least one opening that terminates at the inside of the cover “and at a side of said cover facing away from a patient.” This feature provides greater ease and efficiency for the hygienic protection of the endoscope and is neither disclosed nor suggested by the applied prior art. Subject matter support for Applicant’s amendment of Claims 29, 47 and 48 exists at Pages 3 – 4 of Applicant’s *Specification* and the *Abstract*.

Applicant has also entered various corrective amendments to the *Specification* in order to attend to the correction of grammatical and typographic errors found to exist in the literal English translation of Applicant’s corresponding P.C.T. application, which serves as the *Specification* in this U.S. National Phase application under §371. Applicant’s amendments to the *Specification* include the correction of typographical errors noted by the Examiner to have existed at Page 5 of Applicant’s disclosure.

Turning now, in detail, to an analysis of the Examiner’s prior art rejection, in the first Office Action the Examiner has rejected independent Claims 29, 47 and 48, as well as various dependent claims, as being anticipated, pursuant to 35 U.S.C. §102(b), by

Silverstein *et al.*, U.S. Patent No. 4,646,722. It is the Examiner's contention that Silverstein *et al.* disclose a protective endoscope sheath as previously claimed by Applicant, *i.e.*, all elements of the claims enumerated in the Examiner's anticipation rejection. As part of the anticipation rejection, the Examiner has argued that a vacuum channel (36) is taught by Silverstein *et al.*, which has an opening (54), which is the means for applying pressure to the vacuum channel (26), which terminates inside of a cover (48), as taught at Cols. 6 – 7 of the applied citation.

In reply to the Examiner's anticipation rejection applying Silverstein *et al.*, as now claimed, Applicant's invention provides that the one or more vacuum channels have at least one opening that terminates at a side of the cover facing away from a patient. This feature provides both greater efficiency for the endoscope protection, by way of ease of handling, as well as further minimizing potential contamination of the endoscope itself, which is neither taught nor suggested by the applied prior art of Silverstein *et al.*

Accordingly, withdrawal of the Examiner's 35 U.S.C. §102(b) anticipation rejection of pending independent Claims 29, 47 and 48 is respectfully requested.

Concerning, finally, the remaining references cited by the Examiner, but not applied in any rejection of Applicant's claims, such additional references have been carefully considered, but are not deemed to adversely affect the patentability of the present invention, as now claimed.

In view of the foregoing, it is respectfully contended that all claims now pending

in the above-identified patent application (*i.e.*, Claims 29-48) recite a novel and hygienically effective protection apparatus and related method for an endoscope, in which the openings of the vacuum channels terminate at the inside of the cover of the endoscope protection at a side of the cover facing away from the patient, which is patentably distinguishable over the prior art. Accordingly, withdrawal of the outstanding rejection and the allowance of all claims now pending are respectfully requested and earnestly solicited.

Respectfully submitted,

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- Enc.: 1. Petition for Two-Month Extension of Time for Response; and,
2. EFT for \$230.00 (Two-Month Extension Fee).

The Commissioner for Patents is hereby authorized to charge the Deposit Account of Applicant's Attorney (*Account No. 19-0450*) for any fees or costs pertaining to the prosecution of the above-identified patent application, but which have not otherwise been provided for.